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(54) **MULTI-INDICATION mRNA CANCER IMMUNOTHERAPY**(71) Applicant: **MORPHOGENESIS, INC.**, Tampa, FL (US)(72) Inventors: **Michael J. P. Lawman**, Temple Terrace, FL (US); **Patricia D. Lawman**, Temple Terrace, FL (US); **Meghan Gentilini**, Tampa, FL (US); **Vijay Ramiya**, Tampa, FL (US); **Marina Victor Abdelmaseeh Bastawrous**, Port Orange, FL (US)(73) Assignee: **MORPHOGENESIS, INC.**, Tampa, FL (US)

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(58) **Field of Classification Search**

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See application file for complete search history.

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Primary Examiner — Quang Nguyen

(74) *Attorney, Agent, or Firm* — Saliwanchik, Lloyd & Eisenschenk

(57) **ABSTRACT**

Synthetic bacterial messenger RNA can be used to prepare autologous, allogenic or direct nucleic acid cancer vaccines. Cancer cells are transfected either in vitro or in vivo with mRNA obtained from DNA that encodes an immunogenic bacterial protein. An immune response to the cancer is generated from direct administration of the mRNA in vivo or administration of vaccines prepared from cancer cells in vitro.